Amendments to the Claims

Claims 1-43 **(Canceled)**

44. **(Currently Amended)** A method of recording video data of N (N is an integer) channels synchronously onto an optical disk, the video data being formed of a time series of video frames, and the~~the input~~ video data on each channel being accompanied by audio data that is recorded synchronously with the video data, the method comprising:

selecting one of the N channels in units of video frames, as a channel of which video data is to be recorded;

recording the video data ~~in the video frame on~~ of the selected channel in a video frame onto the optical disk; and

recording the audio data ~~on~~ of the N channels ~~as well as~~ with the video data ~~on one~~ of the selected channel in each video frame,

whereby the video data ~~on~~ of the N channels ~~can be~~ are time-division multiplexed in units of video frames and recorded onto the optical disk.

45. **(Currently Amended)** The method according to claim 44, wherein the selecting comprises selecting each of the N channels ~~channel is selected at~~ every N frames as ~~a~~ the selected channel of which the video data is recorded.

46. **(Currently Amended)** The method according to claim 44, wherein the selecting comprises selecting each of the N channels based on an allocation ratio of ~~the~~ a number of video frames for each channel to be recorded in a predetermined ~~time is~~ time, the allocation ratio being determined according to ~~the~~ contents of the video data ~~on~~ of each channel.

47. **(Currently Amended)** The method according to claim 46, wherein, when the ~~input~~ video data comprises attribute data indicating the contents of the video data, the method further comprises detecting the attribute data from the video data, and determining the contents of the video data ~~on~~ of each channel according to the detected attribute data.

48. **(Currently Amended)** The method according to claim 44, wherein, when each of the video data ~~on~~ of the N channels ~~(N is an integer)~~ in a predetermined record time is to be synchronously recorded onto the optical disk, the method further comprises:

getting a total data amount for the N channels of video data to be recorded in the predetermined record time, and a capacity of a free area of the optical disk in which data ~~can be recorded~~ is recordable;

comparing the total data amount to be recorded with the capacity of the free area of the optical disk; and

determining, when the total data amount to be recorded is greater than the capacity ~~amount~~ of the free area of the optical disk, ~~the~~ a number of ~~the~~ video frames to be recorded in a predetermined time so that in at least one of the N channels the total data amount to be recorded is less than or equal to the capacity of the free ~~are~~ area of the optical disk.

Claim 49 **(Canceled)**

50. **(Currently Amended)** A method of reproducing recorded data from an optical disk having an area in which video data ~~on~~ of N channels (N is an integer) is recorded in units of frames by a time-division multiplexing method,

the optical disk storing the video data ~~selected in~~ of each channel every predetermined number of frames ~~on one channel~~, and audio data ~~on~~ of all channels continuous to the video data of each channel,

the method comprising:

~~inputting~~ receiving information for designating a channel of the N channels to be reproduced;

reading data from the optical disk in units of frames; and

if ~~video~~ the data ~~included in~~ of the read frame ~~is~~ includes the video data of the designated channel to be reproduced, ~~then~~ reproducing the video data, and further reproducing the audio data that is included in the data of the read frame and is of ~~on~~ the designated channel to be ~~recorded~~ reproduced.

Claims 51-63 **(Canceled)**

64. **(Currently Amended)** An apparatus for recording video data of N (N is an integer) channels synchronously onto an optical disk, the ~~input~~ video data ~~on~~ of each channel being accompanied by audio data that is recorded synchronously with the video data, and the video data being formed of a time series of video frames, the apparatus comprising:

a recording section operable to record data onto the optical disk; and

a section ~~that selects~~ operable to select one of the N channels in units of video frames, as a channel of which video data is to be recorded, ~~records~~ control the recording section to record the video data of ~~in the video frame on~~ the selected channel in a video frame onto the optical disk, and ~~records~~ control the recording section to record in each video frame the audio data ~~on~~ of the N channels ~~as well as~~ with the video data ~~on one~~ of the selected channel;

whereby ~~N channels of~~ the video data ~~can be~~ of the N channels are time-division multiplexed in units of video frames and recorded onto the optical disk.

65. **(Currently Amended)** The apparatus according to claim 64, wherein the section is operable to select each of the N ~~channel is selected at~~ channels every N frames as ~~a~~ the selected channel of which the video data is recorded.

66. **(Currently Amended)** The apparatus according to claim 64, wherein the section is operable to select each of the N channels based on an allocation ratio of ~~the~~ a number of video frames for each channel to be recorded in a predetermined ~~time is~~ time, the allocation ratio being determined according to ~~the~~ contents of the video data ~~on~~ of each channel.

67. **(Currently Amended)** The apparatus according to claim 66, wherein, when the ~~input~~ video data comprises attribute data indicating the contents of the video data, the section is operable to detect the attribute data ~~is detected~~ from the video data, and determine the contents of the video data ~~on~~ of each channel ~~is determined~~ according to the detected attribute data.

68. **(Currently Amended)** The apparatus according to claim 64, wherein, in order to record synchronously each of the video data ~~on~~ of the N channels ~~(N is an integer)~~ in a predetermined record time onto the optical disk, the apparatus further comprises:

a section ~~that computes~~ operable to compute a total data amount for the N channels of video data to be recorded in the predetermined record time, and a capacity of a free area of the optical disk in which data ~~can be recorded~~ is recordable;

a section ~~that compares~~ operable to compare the total data amount to be recorded with the capacity of the free area of the optical disk; and

a section ~~that determines~~ operable to determine, when the total data amount to be recorded is greater than the capacity ~~amount~~ of the free area of the optical disk, ~~the~~ a number of ~~the~~ video frames to be recorded in a predetermined time so that in at least one of the N channels the total data amount to be recorded is less than or equal to the capacity of the free ~~are~~ area of the optical disk.

Claim 69 **(Canceled)**

70. **(Currently Amended)** An apparatus for reproducing recorded data from an optical disk having an area in which video data ~~on~~ of N channels (N is an integer) is recorded in units of frames by a time-division multiplexing method,

the optical disk storing the video data ~~selected~~ of each channel in every predetermined number of frames ~~on one channel~~, and audio data ~~on~~ of all channels continuous to the video data of each channel,

the apparatus comprising:

a section ~~that inputs~~ operable to receive information for designating a channel of the N channels to be reproduced;

a section ~~that reads~~ operable to read data from the optical disk in units of frames; and

a section ~~that~~ operable to, if ~~video~~ the data ~~included in~~ of the read frame ~~is~~ includes the video data of the designated channel to be reproduced, ~~then reproduces~~ reproduce the video data, and the audio data that is included in the data of the read frame and is of ~~on~~ the designated channel to be ~~recorded~~ reproduced.

Claims 71-76 **(Canceled)**